IN THE CLAIMS

Please cancel Claims 1-5, without prejudice. Please add new Claims 6-28, as follows:

6. (New) In code division multiple access (CDMA) communication system, wherein packets of data are transmitted using a plurality of orthogonal code sequences and wherein each user of said code division multiple is allocated an orthogonal code sequence for communication on a traffic channel for transmitting variable rate packets of data symbols comprising:

a channel packetizer for receiving said variable rate packets and, when a number of said data symbols included in ones of said variable rate packets exceeds a threshold value for splitting each of said ones of said variable rate packets into a traffic packet and at least one overflow packet;

a first modulator for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of said plurality of orthogonal code sequences and for modulating said orthogonal modulated traffic packet in accordance with a first pseudorandom noise (PN) sequence;

a second modulator for receiving said at least one overflow packet and for modulating said at least one overflow packet in accordance with an orthogonal code sequence of said plurality of orthogonal code sequences and for modulating said at least one orthogonal modulated overflow packet in accordance with at least one additional pseudorandom noise (PN) sequence wherein said at least one additional PN sequence is nonorthogonal to said first PN sequence; and

a transmitter for transmitting said traffic packet on said traffic channel and for transmitting at least one overflow packet on said at least one overflow channel.

7. (New) The apparatus of Claim 6 wherein said channel packetizer is responsive to a rate signal.

8. (New) The apparatus of Claim 6 further comprising a variable rate vocoder for receiving speech samples and for compressing said speech samples in accordance with a variable rate vocoder format to provide said variable rate packets.

9. (New) The apparatus of Claim 8 further comprising an encoder for error correction coding said variable rate packets.

10. (New) The apparatus of Claim 9 further comprising an interleaver for reordering said variable rate packets, said encoder being disposed between said variable rate vocoder and said interleaver.

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11. (New) A system for transmitting variable rate packets of data symbols comprising;

means for receiving said variable rate packets and for dividing each of said variable rate packets including more than a threshold number of said data symbols into a traffic packet and into an overflow packet, each said traffic packet being provided to a first packetizer output and each said overflow packet being provided to a second packetizer output;

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means for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of a plurality of orthogonal code sequences and having a first output for providing said orthogonal code sequence modulated traffic packet;

means for receiving said orthogonal code modulated traffic packet and for modulating said orthogonal code modulated traffic packet in accordance with a first PN sequence;

means for receiving said second packet and for modulating said traffic packet in accordance with a second orthogonal code sequence of said plurality of orthogonal code sequences and having a first output for providing said orthogonal code modulated traffic packet;

means for receiving said orthogonal code modulated overflow packet and for modulating said orthogonal code modulated overflow packet in accordance with a second PN sequence which is non-orthogonal to said first PN sequence; and

a transmitter means having a first input coupled to said first modulator output and having a second input coupled to said second modulator output, said transmitter further having an output.

12. (New) The apparatus of Claim 11 wherein said channel packetizer is responsive to a rate signal.

13. (New) The apparatus of Claim 12 further comprising a variable rate vocoder for receiving speech samples and for compressing said speech samples in accordance with a variable rate vocoder format to provide said variable rate packets.

14. (New) The apparatus of Claim 13 further comprising an encoder for error correction coding said variable rate packets.

15. (New) The apparatus of Claim 14 further comprising an interleaver for reordering said variable rate packets, said encoder being disposed between said variable rate vocoder and said interleaver.

16. (New) A method for transmitting variable rate packets of data symbols comprising;

a channel packetizer having an input for receiving said variable rate packets and for dividing each of said variable rate packets including more than a threshold number of said data symbols into a traffic packet and into an overflow packet, each said traffic packet being provided to a first packetizer output and each said overflow packet being provided to a second packetizer output;

a first modulator having an input for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of a

plurality of orthogonal code sequences and having a first output for providing said orthogonal code sequence modulated traffic packet;

a first PN modulator having an input for receiving said orthogonal code modulated traffic packet and for modulating said orthogonal code modulated traffic packet in accordance with a first PN sequence;

a second modulator having an input for receiving said second packet and for modulating said traffic packet in accordance with a second orthogonal code sequence of said plurality of orthogonal code sequences and having a first output for providing said orthogonal code modulated traffic packet;

a second PN modulator having an input for receiving said orthogonal code modulated overflow packet and for modulating said orthogonal code modulated overflow packet in accordance with a second PN sequence which is non-orthogonal to said first PN sequence; and

a transmitter having a first input coupled to said first modulator output and having a second input coupled to said second modulator output, said transmitter further having an output.

17. (New) The method of Claim 16 wherein receiving said variable rate packets is responsive to a rate signal.

18. (New) The method of Claim 16 further comprising receiving speech samples and for compressing said speech samples in accordance with a variable rate vocoder format to provide said variable rate packets.

19. (New) The apparatus of Claim 18 further comprising means for error correction coding said variable rate packets.

20. (New) The apparatus of Claim 16 further comprising means for ~~interleaving said variable rate packets.~~

21. (New) A system for transmitting variable rate packets of data symbols comprising;

a channel packetizer having an input for receiving said variable rate packets and for dividing each of said variable rate packets including more than a threshold number of said data symbols into a traffic packet and into an overflow packet, each said traffic packet being provided to a first packetizer output and each said overflow packet being provided to a second packetizer output, said channel packetizer responsive to a rate signal;

a first modulator having an input for receiving said traffic packet and for modulating said traffic packet in accordance with said orthogonal code sequence of a plurality of orthogonal code sequences and having a first output for providing said orthogonal code sequence modulated traffic packet;

a first PN modulator having an input for receiving said orthogonal code modulated traffic packet and for modulating said orthogonal code modulated traffic packet in accordance with a first PN sequence;

a second modulator having an input for receiving said second packet and for modulating said traffic packet in accordance with a second orthogonal code sequence of said plurality of orthogonal code sequences and having a first output for providing said orthogonal code modulated traffic packet;

a second PN modulator having an input for receiving said orthogonal code modulated overflow packet and for modulating said orthogonal code modulated overflow packet in accordance with a second PN sequence which is non-orthogonal to said first PN sequence; and

a transmitter having a first input coupled to said first modulator output and having a second input coupled to said second modulator output, said transmitter further having an output.

22. (New) The apparatus of Claim 21 further comprising a variable rate vocoder for receiving speech samples and for compressing said speech samples in accordance with a variable rate vocoder format to provide said variable rate packets.

23. (New) The apparatus of Claim 22 further comprising an encoder for error correction coding said variable rate packets.

24. (New) The apparatus of Claim 23 further comprising an interleaver for reordering said variable rate packets, said encoder being disposed between said variable rate vocoder and said interleaver.

25. (New) In a system in which variable rate packets of data symbols including in excess of a threshold number of said data symbols are each transmitted as a traffic packet and an overflow packet, an apparatus for receiving said variable rate packets of data symbols comprising:

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a traffic demodulator for demodulating said traffic packet received by said apparatus using a first pseudonoise (PN) sequence and a sequence of a first set of orthogonal sequences to provide a demodulated traffic packet;

an overflow demodulator for demodulating said overflow packet received by said apparatus using a second pseudonoise (PN) sequence and a second sequence of said first set of orthogonal sequences to provide a demodulated overflow packet; said overflow demodulator means dynamically allocated based on whether said variable rate packets of data symbols exceed a threshold number of said data symbols, wherein said first PN sequence is temporally offset and non-orthogonal to said second PN sequence; and

a combiner for combining said demodulated traffic packet and said demodulated overflow packet to provide said variable rate packets.

26. (New) The apparatus of Claim 25, wherein said traffic demodulator means further comprises:

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an orthogonal traffic sequence generator for generating a traffic sequence; and

an orthogonal traffic despreader for receiving said demodulated traffic packet and despreading said demodulated traffic packet using said traffic sequence,

~~wherein said overflow demodulator further comprises:~~

an orthogonal overflow sequence generator for generating an overflow sequence; and

an orthogonal overflow despreader for receiving said demodulated overflow packet and despreading said demodulated overflow packet using said ~~overflow sequence.~~

27. (New) The apparatus of Claim 25, wherein said combiner continuously monitoring said traffic demodulator and said overflow demodulator.

28. (New) The apparatus of Claim 25, wherein said combiner monitors said overflow demodulator only when instructed by said traffic demodulator.